IMPRESSIONS OF MEDICAL EDUCATION IN INDIA

Introductory Notes.

1. Except for the summary attached herewith I have numbered the sections and paragraphs in the order of the importance of their contents, and I have used the first sentence to state the essentials of each paragraph. Rapid perusal, therefore, of the first sentences of each paragraph will convey the substance of the report as a whole.

2. The report consists of a brief preliminary summary, the body of the report divided into Introductory Notes, Main Impressions, Suggestions and Comments on the Context and Circumstances of medical education in India. The summary is intended for the use of those who do not have time to read the rest of the report. Under Main Impressions I have arranged the major factors and aspects of medical education which have impressed me. I have divided the section marked Suggestions into two parts: those that involve expenditure of money and those that do not. The comments on the Context of Medicine should indicate to Indian readers that I have been aware of some of the major factors affecting, and at times controlling, the scale or the rapidity of changes that need to be made. These comments will also serve to inform my colleagues in New York of the circumstances of the work for which doctors are being trained in India.

3. My purposes in writing this report are to comply with the request of the Minister for Health for such a statement, and to condense for the use of my colleagues in America a statement of impressions received during a visit to India during the autumn and winter of 1951/52. I do not intend the report to be critical in the unpleasant sense of that word. I would prefer the report to focus attention on the future and on the danger of certain trends or tendencies, for I believe that there is a good deal of truth in the aphorism "to forsee is to govern."

Time is always important in a situation that is worsening and there are several aspects of medical education in India that must be either mended or ended. I think that laymen should remember that doctors, accustomed as they are to remedying unsatisfactory affairs and accepting innumerable handicaps, are perhaps professionally prone to making the best out of what is at hand rather than speaking out bluntly in favor of conditions they require in order to do the best job possible. As an outsider I venture to state views that I know my Indian colleagues hold but which their positions do not permit them to utter, or their present discouragement and apathy prevent them from repeating. I should greatly regret my blunt candor if it were to be taken as unsympathetic censure or gratuitous fault-finding. Brevity also invites misunderstandings but even with risks that cannot be controlled this report is both candid and brief.

3. The report confines itself to impressions received during visits to medical colleges, schools and some institutes in the following places: Bombay, Poona, New Delhi, Agra, Lucknow, Calcutta, Vizagapatam, Hyderabad, Bangalore, Trivandrum, Mysore, Vellore and Madras. Thanks to the hospitable foresight of the Minister of Health, The Hon. Rajkumari Amrit Kaur, of Dr. Raja, Dr. Pandit, the Directors of Medical Services in the various states, and with the help of Drs. Watson and Anderson of the Foundation's staff, the visits were without any exceptions well planned and efficiently managed. I could not acknowledge adequately the debts of hospitality Mrs. Gregg and I feel. And I should add that I more than appreciate the generosity of all the teachers and administrators in the long list of institutions who allowed me to talk for an hour or two with them about their work, their interests and their needs. The visits in India filled 94 days full of pleasant and stimulating work for which I am grateful to all those who helped so effectively to make these visits possible.

MAIN IMPRESSIONS.

I. The prospects of having satisfactory teachers in the medical colleges are poor and becoming worse. The situation should cause positive alarm.

1. Salaries for teachers of all grades are far too small; in no colleges do salaries or dearness allowances reflect the 300 to 400 per cent increase in living. Teachers on full time in non-clinical subjects deserve larger salaries than clinicians on part or full time. To infer that because some professors have not yet resigned they can be expected to continue is both unfair and unwise. Even in ancient Greece it was observed that in civil life only two groups of human beings can kill with impunity: judges and doctors. If a government seriously underpays the teachers of its doctors it will deserve the charge of criminal negligence. I have been shocked and depressed on learning the salaries given in Indian medical colleges for honest, competent and essential services.

2. The quality of the teachers is on its way from bad to worse. Vacancies are numerous. The methods of selection by Public Service Commissions too frequently ignore professional and scientific criteria. Young doctors without interest or aptitude for teaching are posted as teachers in subjects that can only suffer from their apathy. A serious defect of the I.M.S. was that it disguised the ideals of Harley Street as Government service and so provided competent clinicians to the upper brackets of British and Indian society without giving Indians any idea of how to find and train in India either competent clinicians or teachers of the medical services. All too few are those who know that behind the much-

prized foreign degrees and diplomas stand a corps of full-time, devoted and decently paid non-clinical teachers. Without such teachers medical education rapidly deteriorates and advanced training becomes a mere commercial investment. One further warning must be noted: when the quality of medical education in India sinks even the best Indian candidates for foreign training will not be welcomed abroad as they have been in the past. This possibility increases the argument for losing no time in improving the quality of the oncoming generation of Indian teachers.

3. The rule of retirement at the age of 55 with pensions that have lost two thrids of their earlier value is now dissuading young men from choosing careers in teaching. As an obvious alternative private practice demands no such heroic sacrifice. Indian legislators can neglect, ignore or over-ride the importance of recruiting enough devoted and well-trained teachers for the future. But they do so im perfect certainty of having ample time to regret their choice, for it will take a long time to correct such inexcusable improvidence.

4. The present senior teachers, especially in the non-clinical subjects, work under a dangerous overload of teaching duties and service demands. The number of students is almost uniformly too large for effective teaching. Understudies or competent substitutes are ominously few. Demonstratorships are frequently vacant or held by young men whose hearts are set upon private practice or foreign clinical degrees at the earliest possible moment. Technicians to carry the burden of routine hospital services in clinical pathology and biochemistry would effect not only an economy of academic brains but an improvement in the number and reliability of diagnostic services. Under the present overload it is either extremely ignorant or insultingly cynical to expedt good research work of honest

teachers or to talk of creating more colleges or increasing the number of students. Furthermore, the effort to induce foreign professors to accept positions in Indian medical colleges where no time, technicians or devoted recruits are available, becomes an effort fraught with disappointment because it avoids facing the fundamental issue.....To import a foreign professor is in large measure to invite him to face and solve defects which now overwhelm admirable but discouraged Indian professors; namely, uninterested demonstrators, insufficient technicians and the overwhelming overload of excessive teaching duties.

II. In India there is a general misunderstanding or underestimate of the value, as well as the cost, of medical care, medical education and research. To the familiar objection "The Government cannot afford to spend so much for medical care" I would observe that the Government cannot afford to spend so little. Medical service has advanced so remarkably that everywhere in the world medical care is passing from being considered a privately purchaseable service or a philanthropic boon, to being demanded as a civic right. This fact puts medical care and medical education to produce medical attendants, in the position of a political issue of growing importance. Witness Russia, China, the U.K. and the U.S.A.- all of these countries where meeting the demands for private practitioners is changing rapidly and profoundly to meeting the <u>need</u> for medical care and public health. I submit that underestimating the importance of medical education amounts to a curious lack of political sagacity. The blame for neglecting the importance of medical education cannot be laid at the door of laymen alone: the medical profession in India seems to me to ignore their own eventual dependence upon popular and general understanding of the value

of medical care, educationand research. Medical educators in India neglect most of their chances to explain the nature of medical science and its potentialities for every living Indian. Until this is better done, more widely done, and more earnestly done, medical education in India will languish for the lack of informed understanding. We need to realise the implications for medical education of the increasing effectiveness of medical science: together with food, clothing and housing, medicine in its broadest sense is coming to be one of the principal means of keeping alive. When this is realised no-one will say that a government wishing for political stability will find the costs of effective medical education too great.

III. More attention should be given to the selection and training of the future doctors in India.

1. Students should be selected in the light of the need for doctors to be socially useful rather than economically successful. Since medical education in India costs from three to twelve times the tuition paid, the state has the obligation as well as the right to select students with more regard to their health, motivation, character and probable social usefulness and somewhat less regard to their marks obtained in competitive examinations. Only when students are fit to represent their communities will community representation accomplish what is expected of it.

2. More weight could well be given to the maturity and thoroughness represented by the B.Sc. as a qualification for entrance to medical colleges. Since the teaching of English is beginning to decrease in the secondary curricular I would expect the use of English in the medical colleges to impose increasing difficulties in the path of students as young as 17 or 18. I found no teachers in favour of discarding English as the medium of medical instruction nor can I see any advantages within the next quarter

century in attempting to encourage or enforce the transfer to Hindi, Urdu or any regional language as a means of instruction. A case could readily be made for adding sociology, statistics and psychology to the traditional chemistry, physics, biology and Englishrequired of the entrant to medical college.

3. The ratio of students admitted to the number of full-time teachers and beds in the teaching hospitals, deserves more attention.In so far as pressures are ~~exerted~~ allowed to increase the numbers of students regardless of this ratio, the results will be the mass production of sub-standard doctors for India. In the quality of all the clinical histories I saw in the hospitals, and in the acknowledged excess of "casuals" or student failures still retained by the colleges, and in the paucity of hospital beds for teaching, and the double shift system there is ample reason for thi nking that the students are being cheated of adequate instruction and control especially in the light of their extreme youth relative to the age of medical students in many other countries. I am of the opinion that entrance numbers of more than 100 per year exceed the teaching facilities of any medical college I visited.

4. To describe the medical course as oneof five year's duration directs attention away from a more realistic fact. The grossly competitive and wasteful educational methods result in failing about 80 to 90% of the students at one point or another in their progress through the college. A considerable proportion of the students are thus obliged to spend five and a half to eight years to enter a profession thatneeds no such additional obstacle to supplying India with more doctors.

5. The minimum age limit for entrance to medical college of 16½ years is less than I have met anywhere in the world. Even if one is prepared to assume that the Indian students are intellectually mature three or four years earlier than elsewhere (and I am not sure that this can be assumed) one can hardly doubt that even in India the younger the students the harder it is to select, teach, house and supervise them, particularly in the larger cities.

IV. The curriculum for a field of knowledge changing as rapidly as is medicine needs constant re-examination and re-adjustment.

1. Too many students fail in examinations. More weight should be attached to monthly tests or daily work. The purpose of examinations for young students should be to weed out obvious incompetence. To expect a boy or girl of 19 to show in three or four hours the results of two year's work is psychologically unsound. It could fail to shock only those who know little of education but by good fortune have survived so senseless an ordeal. The purpose of medical education is to produce good doctors, not passers of unreasonably difficult examinations. I found it a sad paradox to be told by several clinicians that the years the students learned the most medicine were the years when there were the fewest examinations.

2. In most colleges the teachers lay no emphasis on the fact that they are preparing students to practice medicine in 1960, 1970 and 1980..... not 1930 or 1940. More emphasis could go towards teaching the students how to learn medicine as it grows and changes, as it undoubtedly will. In this point too I must say that in my visits I missed any reasonable awareness on the part of the teachers of the importance of the <u>future.</u>

3. We deceive ourselves by talking of a five year medical course. Such talk leads to overloading each subject with details (e.g. Anatomy) and hurrying the student into avoiding the responsibility of deciding what is important in his general perspective. Such talk also diverts attention from the value of a supervised internship. I would strongly support the general adoption of the Pre-registration Clinical Assistantships and further development of the housemanships as definitely preferable to diploma courses and ever more mugging for examinations. The Indian student gets far too much theory and far too little supervised experience.

4. In the curricular of most colleges the following changes should be made when satisfactory teachers can be found or trained: Histology should be transferred to the Anatomists thus providing the Psychologists with more time for Biochemistry and Applied Human Physiology. More time should be given to Medical Psychology and Psychiatry. More effort should be spent by the clinicians in securing post mortems: the present poor performance of most hospitals in India in this direction comes from lack of energy and skillful attention to the sentiments of the next of kin. Teaching hospitals should be judged by the percentage of their deaths whose certain cause is proven by post mortem.

5. The teaching of Public Health calls for radical revision, mainly to come from the Director of Medical Services who should and could benefit his public health service by organising it around the problem of attracting and maintaining student interest in this important aspect of medicine in India.

6. I do not know enough about Ayurvedic and Unani medicine to make any useful comment. But it would seem to me that the extent to which these systems are linked to politics and tradition suggests that the best course to follow is to improve the education in modern medicine (especially

in the ethical and psychological training of the student) and encourage time and public education in health matters to clarify this issue. Suppression of violent attack would be somewhat worse than a waste of time.

V. India needs medical attendants of severalkinds besides doctors. If adequate numbers of nurses, technicians etc., were available the usefulness of doctors would be increased thrice to ten-fold.

1. Nurses to the number of 688000 would be needed if India were to match the U.K. in the ratio of trained nurses to the general population. In the face of such a vast deficiency the practical points of attack are the training of teachers and supervisors of Nurses' Training Schools and the payment of larger salaries to trained nurses in government employ. Only so can new schools be erected and maintained.

2. The same measures apply to the preparation for increasing the number of schools for the training of health visitors.

3. Employing qualified medical men to do technicians work cannot be defended on the grounds of economy since the time of a good technician costs less than that of a doctor, nor on the grounds of efficiency since an experienced technician does better work than an overloaded and inexperienced doctor (who knows perfectly well that his time is being wasted).

4. The larger teaching hospitals deserve the services of full-time hospital administrators. When the dean or principal of a medical college must serve as head of the teaching hospital I must assume that many important aspects of both positions are either neglected or left in the hands of clerks who are not qualified for such responsibilities.

VI. Research work in Indian medical colleges is all but crushed by the teaching load, the scarcity of technicians, the claims of private practice on part-time teachers, the lack of financial support, the rarity

of dependable careers in research, the provincialism of rival states, and the prestige of examinations diplomas and authoritarianism as contrasted to and recognition of the spirit of enquiry.

1. Research on the diseases of Indians, done by Indians in India, offers far greater returns than research on the diseases of Indians done in India by foreigners or research on the diseases of other nationalities done by Indians abroad. This is true because research done here by Indians in Indian medical colleges will interest and attract capable students - and in their hands lies the future of Indian research.

2. Only when research opportunities are made available in Indian medical colleges will teaching posts in India become attractive to teachers from other countries where research of the life of a teacher at every stage of his career. It is somewhat more than futile to send a young Indian abroad to learn research methods and then discourage his chances of doing research when he returns.

3. Except for the provision of decent salaries no one reform would have a more salutary effect on the careers of teachers than the certain prospect of being able to do first rate research work.

VII Medical education suffers when medical colleges are treated as mere technical schools for the quickest and most "practical" preparation of additional practitioners. It is not from the mere repetition of clinical observations already known that medicine has grown but from the application of the new discoveries of mathematics, chemistry, physics, biochemistry, biophysics, biology, psychology, sociology andother fields. Ideally the medical college should be not merely affiliated with the university but be far more intimately related to the resources and academic standards of the university. It seemed to me that except at Vizagapatam the nature of the relationships between medical college and

university were depressingly formal, tenuous and unproductive. Affiliation, like matrimony, has much to be said for it, but a good deal depends on the mutual understanding of what affiliation is for, and on the character of the contracting parties. In most countries medical education tends to become isolated, self-regarding and sterile. It needs contact with fields that contribute to medicine. Academic control alone falls far short of the ideal university connection.

SUGGESTIONS.

A. Those which cost little or no money.

1. The doctors in government service should be divided into two cadres teachers and all others. This would substantially aid in clarifying the importance of maintaining an adequate supply of interested teachers.

2. If the Principals and Faculties of medical colleges are given a larger freedom and larger responsibility in choosing teachers from a cadre maintained as suggested above, the attention to teacher-quality would probably increase.

3. Less emphasis might well be given to final examinations and more emphasis could wisely be placed on monthly tests. In place of the present ferocious ~~death~~ failure rate I would suggest that firmness in dismissing a student after three failures in any examination would be more efficient as well as far more humane. The present ~~massacre~~ rate is inexcusably unfair and indefensibly costly.

4. The retirement age for professors should be fixed at 60 instead of 55 and this change should be made before additional losses of experienced teachers are inflicted needlessly on an already depleted professoriate.

5. As a means of anticipating the oncoming shortages of adequately trained professors the D.M.S. at New Delhi should prepare a tabulation by age groups for each teaching branch of medecine of all of the teachers in Indian medical colleges, and tax supported research institutes. From such a tabulation it would be easy to see what subjects (e.g., Psychiatry, Pharmacology etc.) can wiselynow receive preferential consideration for foreign fellowships, and when a dearth or excess of teachers in any subject may be expected.

6. The time given to teachers of Psychiatry and/or Psychological Medecine should be increased and services of ten beds be created in general hospitals for the use of such teachers in every medical college. In no medical college in India have I seen even a proximate justice done to this aspect of the care of human beings.

7. The teaching of Histology should be transferred from the Departments of Physiology to the Departments of Anatomy (of the Calcutta medical college) but without increasing the hours given to the teaching in the departments of Anatomy. This would reduce the time available for the unimportant details of gross anatomy and give to the physiologists more time for bio-physics, bio-chemistry and applied human physiology including personal hygiene.

8. The Indian Council on Medical Education could prepare annually a report to be released to the newspapers, radio and other appropriate media for the guidance of prospective medical students and their parents on the entrance requirements, the current enrolment in medical schools, communal representation, the numbers of M.B.B.S. degrees conferred, the costs of medical education including those borne by the State, the posts currently open in teaching and government service and the salaries offered, together with such other information as would better guide students contemplating careers in medicine. Such frank and informative annual reports

could influence favourably the recruitment to medicine in a very short time and if accurately done could also stimulate improvement in backward states and indeed throughout all the colleges. The percentage of post mortems secured as related to the tot l deaths in every teaching hospital should become a subject of wide comparison since it is the best single evidence of the efficiency of hospital teaching and scientific honesty. I would think that the Council has a moral obligation to deal with prospective students and their parents in this open and explicit way.

9. A service of about a dozen beds in the general teaching hospitals of each college should be given to the professors of Pharmacology for teaching practical therapeutics. For the next two decades Indian doctors in private practice or isolated government posts will continue to be dispensers to a degree that justifies more attention to their training in actual therapeutics.

B. Those that will cost money.

1. By far the most important action immediately and for the future is to raise the salaries of all grades of teachers. Unless the Government is prepared to forbid the private practice of medicine (as the Communists did in Russia) you willhave to face the fact that practitioners can earn from two to thirty times as much as their teachers, and can continue to do so after the age of 55. The buying power of teachers' salaries is now less than one third of what it was when the present scale was fixed. A trivial increase that fails to interest the younger generation will simply be throwing money away to no purpose whatever. I believe that you face increasing deterioration of medical education in India if you do not adopt a scale of salaries at least as high as:

	Professors	Assistant Professors & Lecturers	Demonstrators
Non clinical full time posts	2000 rising to 2500	1000 - 1500	500 - 800
Clinical with restricted practice in the Pay Clinics	1800 rising to 2200	900 - 1200	500 - 800

2. A large increase in the number of teaching posts will be needed if teachers are to have time for research, or if new colleges are planned for the next two decades, or if any measure of selectivity or choice is to be used in the "selection" of teachers for posts soon to be vacated by retirements at 55. But there can be little sense in increasing the number of vacant posts at salaries of no interest to anyone competent to teach.

3. Technicians should be trained and employed in numbers sufficient to allow all grades of teachers to teach. At Calcutta and Vellore are given training courses for technicians. These courses could be helped and later similar courses instituted elsewhere. But in many cases professors would train their own technicians if adequate salaries were provided to retain them.

4. Plans for more medical colleges in India should be drawn up by the Council. I would think, however, that the immediate difficulties of the existing schools make further raids on your teaching strength, such as an All India Institute, completely unwise until 1960. But more schools there will be and planning could wisely be done now. The Committee for Upgrading serves as a useful example of such foresight.

5. The Council could sensibly counteract the tendency to provincial jealousies and separation by fostering and supporting the expenses of meetings comparable to the Pathologists' meeting at Hyderabad in November. If encouragement were given to the junior teachers to attend such meetings or, better still, to have one of their own, the future choices of professors would be improved

considerably. Anything that aids comparison makes choice more satisfactory.

6. Student Health Services and the physical examination of students as part of the procedure for the selection of students deserve more attention and support than I found in most of the medical colleges. One might expect in a medical college some attention to the health, nutrition and physical welfare of students, if only as an example set.

7. The magazine of the Indian Medical Association "Your Health" could be used as a means of spreading information on medical education, research and public health. Aid in the form of 5000 paid subscriptions to be sent to newspaper editors, legislators, state government officials and members of the profession would help produce better understanding of medical education than now exists.

8. If candidates who have passed pre-medical courses in sociology, psychology and statistics were given explicit preference in admissions to medical colleges, the students would be better prepared for the practice of medicine than is now the case. It will take money, however, to assure a desirable level of teaching in such courses.

9. The Central Government could make a collection of the architects' plans of all the Indian hospitals and colleges built since 1940 and make these plans available to all institutions now contemplating the construction of new buildings. It would soon become evident that the Central Govt. could employ a Consultant in this connection on Hospital and Medical College construction. This would give valuable and economical service.

10. For certain fields in the medical curriculum foreign professors might be engaged. The main obstacles are the absence of junior Indian assistants interested in the career of teaching and research, the extreme overload of teaching characteristic of Indian medical colleges, the lack of time, technicians and equipment for research, and the scarcity of foreign professors who would be

willing to leave home for extended periods of service, the delays attendant on the ordering, shipment and payment of instruments, parts of instruments and consumable supplies that must be imported, and the tendency to relieve yourselves of responsibilities by delegating them to foreign miracle men.

11. If some explicit percentage of a State's revenue could be fixed in advance over five year periods for maintainance (not new capital expenditures) the studies preliminary to fixing this exact percentage would show that medical education is extremely expensive, but it is part of the cost of keeping alive. No one of us can ascribe his good health to good luck: it is by money, forethought and hard work that we drink safe water, eat safe food, escape deadly disease and are cured by well trained surgeons and physicians. Why do we begrudge expenditures so vitally important?

THE CIRCUMSTANCES OR CONTEXT OF MEDICAL EDUCATION IN INDIA.

1. The population of India is about 360,000,000. There are about 50,000 doctors trained in modern medicine. How many other "healers" of other kinds there may be no one knows, but I should be surprised if there was not one for every 900 of the population - i.e. 400,000.

The population is 85 to 90% village. Urbanism, at the expense of village life and of a disastrously disorganized type, exists in all of the larger cities. Indian society is in flux.

The population is reported to have increased 13.5% in the last decade, and there is no evidence that the rate of increase has slackened. The arable land under cultivation has decreased.

Malnutrition and poverty are not only widespread; they influence public policy and the private conduct of every citizen.

Agricultural practices are primitive and wasteful. They are also traditionally and tenaciously followed. Religious beliefs or superstitions that protect the lives, destructive monkeys and 100,000,000 unproductive cattle exact

additional losses upon the production of crops for human use.

2. Communication of useful knowledge and needed services in a country where there are 16 main languages and ~~some~~ 200 dialects, would encounter obvious difficulties even if the literacy rate were high. Among the Indian States Travancore-Cochin is the only state where more than 25% of the population can read and write. Though caste plays a diminishing role as a barrier to interchange, the same cannot be said of religion, if the Partition of Pakistan ~~and the so-called Police Action in Hyderabad~~ derived from religious differences or communalism.

Roads that permit medical officers, nurses and patients to move from village to village are so poor and so nearly impassable in wet weather that the distribution of medical care becomes excessively hard. To expect even salaried doctors to live in isolated primitive villages ~~shows~~ either ignorance of village life or ignorance of the criteria now used in the selection of medical students.

Provincial rivalries, jealousies and isolation, though not easily verifiable, can hardly escape the outsider's observation, and it is idle to suppose that among the ~~27~~ medical colleges in India there is as yet interchange of academic personnel that deserves to be considered easy or unimpeded.

3. The partition of Pakistan imposed immense expense to the governments involved. It furthermore caused an almost incalculable dislocation of medical and academic personnel, especially in Pakistan, and absorbed for relief work large sums that might otherwise have been applied to education and medical welfare work of a more lasting kind.

4. The heritage of the Past in India is complicated indeed. For the future of medicine in India I would think <u>compassion and concern for the welfare of the whole people</u> as both the spiritual and the practical basis for success. The tradition of the I.M.S. seems to me to have been tinctured with medical colonialism, private practice, early retirement, and advanced degrees for a privileged elite. These values are not what the Indian doctor needs. The

traditions of family, caste, religion, and the glories of the Past, isolate and protect the individual Indian from the poverty, ignorance the population pressure that surround him almost to suffocation. Nor is it more of such protecting isolation that will help the Indian doctor to work with others in the service of the whole people. Nor is it any kind of conservatism except the most carefully considered, that will survive the present political, social and economic strains. Prompt and large assistance must be given and prompt and radical changes must be made - not merely planned and written up, to be ignored, postponed or debated.

Alan Gregg

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